

### REMARKS

By this amendment, claims 36-37 and 40 have been amended. New claims 49-50 have been added. Claims 35-37 and 40-50 are pending in the application. Applicant reserves the right to pursue the original claims and other claims in this and other applications.

Claims 35-36 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Zhao et al. (US 6,339,248). This rejection is respectfully traversed.

Claims 35-37, 40, 42-43, and 45 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhao et al. (US 6,339,248) in view of Kochi et al. (US 6,670,990). This rejection is respectfully traversed. In order to establish a *prima facie* case of obviousness "the prior art reference (or references when combined) must teach or suggest all the claim limitations." M.P.E.P. §2142. Neither Zhao et al. nor Kochi et al., even when considered in combination, teaches or suggests all limitations of independent claims 35 or 42.

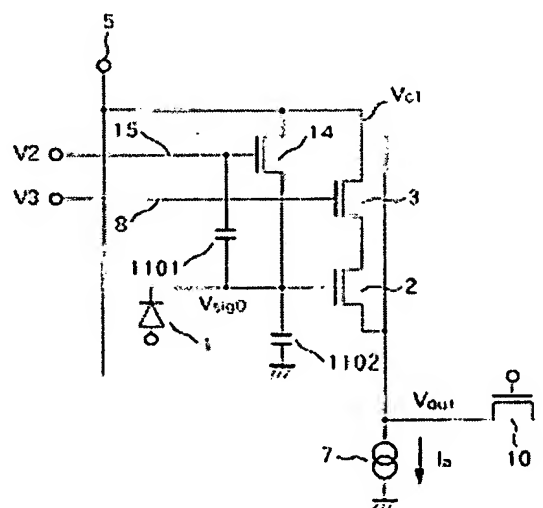
Claim 35 recites a pixel comprising, *inter alia*, "a reset region ... configured to apply a reset charge to said charge collection region in response to a pulsed reset signal applied to said reset region; a pulsed voltage source for providing said pulsed reset signal; and a capacitor, said capacitor having a first terminal in electrical communication with said pulsed voltage source and a second terminal in electrical communication with said reset region" (emphasis added). Applicant respectfully submits that Koichi et al., even when combined with Zhao et al., does not teach or suggest these limitations.

Claim 42 recites a pixel comprising, *inter alia*, "a charge collection region provided in a substrate; a reset region ... for periodically resetting a charge level of said

charge collection region ...; a source follower transistor ...; a pulsed voltage source ...; and a capacitor in electrical communication with said pulsed voltage source, said reset region, and said source follower transistor for storing charge collected in said charge collection region" (emphasis added). Applicant respectfully submits that Koichi et al., even when combined with Zhao et al., does not teach or suggest these limitations.

To the contrary, Koichi et al. teaches in FIG. 14 (reproduced below) that "1101 is a first capacitor formed between the gate of the reset switch 114 and the gate of the MOS transistor 102." Col. 15, ln. 51-53 (emphasis added). MOS transistor 102 is a row select transistor, not a source follower transistor. Koichi et al. further teaches that "1102 denotes a second capacitor formed between the gate of the MOS transistor 102 and ground." Col. 15, ln. 55-57 (emphasis added). Therefore, capacitor 1102 cannot read on the capacitor of the claimed invention. Applicant respectfully submits that Koichi et al. does not disclose, teach, or suggest the capacitor arrangement recited in claims 35 and 42. Nor does Zhao et al. teach or suggest these limitations, as noted in the Office Action at page 4. Thus, Zhao et al. does not remedy the deficiency of Koichi et al.

Koichi et al. FIG. 14



Since Zhao et al. and Koichi et al. do not teach or suggest all of the limitations of claims 35 and 42, claims 35 and 42 are not obvious over the cited references. Claims 36-37, 40, 43, and 45 depend, respectively, from claims 35 and 42, and are patentable at least for the reasons mentioned above, and on their own merits. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claims 35-37, 40, 42-43, and 45 be withdrawn and the claims allowed.

Claims 41 and 44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhao et al. in view of Koichi et al., and further in view of Dasgupta (US 6,146,939). This rejection is respectfully traversed. Claims 41 and 44 depend from claim 42 and are patentable at least for the reasons mentioned above. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claims 41 and 44 be withdrawn.

Claims 46-48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhao et al. in view of Koichi et al., and further in view of Wada et al. (US 6,677,676). This rejection is respectfully traversed. Claims 46-48 depend from claim 42 and are patentable at least for the reasons mentioned above. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claims 46-48 be withdrawn.

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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